

INTERNATIONAL SEARCH REPORT

Internat
PCT/EP
cation No
03283

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C23C16/04 C23C10/04 C23C8/04 C23C4/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

PAJ, EPO-Internal, WPI Data, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 845 139 A (BALDI ALFONSO L) 4 July 1989 (1989-07-04) example 1	3-5,7,12
X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12, 29 October 1999 (1999-10-29) & JP 11 181561 A (TOSHIBA MACH CO LTD), 6 July 1999 (1999-07-06) abstract	1,2
X	GB 2 210 387 A (ROLLS ROYCE PLC) 7 June 1989 (1989-06-07)	1
A	page 1, line 1 - line 31 -/--	2



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the international search

25 July 2003

Date of mailing of the international search report

31/07/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE WPI Section Ch, Week 198328 Derwent Publications Ltd., London, GB; Class M13, AN 1983-708382 XP002230816 -& JP 58 093866 A (AGENCY OF IND SCI & TECHNOLOGY), 3 June 1983 (1983-06-03) abstract	9-11,14
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 14, 5 March 2001 (2001-03-05) & JP 2000 311870 A (MITSUBISHI ELECTRIC CORP), 7 November 2000 (2000-11-07) abstract	6
A	US 2001/007708 A1 (SZALA LAWRENCE EDWARD ET AL) 12 July 2001 (2001-07-12) paragraph '0034!	8,10,12
A	US 5 867 762 A (RAFFERTY KEVIN ET AL) 2 February 1999 (1999-02-02) column 3, line 56 -column 4, line 38	3-14
A	US 4 128 522 A (ELAM RICHARD C) 5 December 1978 (1978-12-05) column 2, line 58 -column 4, line 68	3-14

INTERNATIONAL SEARCH REPORT

Internat
PCT/EP 8 03283

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4845139	A	04-07-1989	US 4260654 A	07-04-1981
			US 4537927 A	27-08-1985
			US 5182078 A	26-01-1993
			US 5194219 A	16-03-1993
			CA 1154636 A1	04-10-1983
			DE 3033074 A1	02-04-1981
			FR 2465006 A1	20-03-1981
			GB 2058844 A ,B	15-04-1981
			IL 60993 A	30-11-1983
			JP 1030907 B	22-06-1989
			JP 1552543 C	23-03-1990
			JP 56096067 A	03-08-1981
			NL 8005016 A ,B,	10-03-1981
			SE 8006214 A	08-03-1981
			US 4970114 A	13-11-1990
			US 4350719 A	21-09-1982
			US 4965095 A	23-10-1990
			US 4977036 A	11-12-1990
			US 4615920 A	07-10-1986
			US 4820362 A	11-04-1989
			US 4824482 A	25-04-1989
JP 11181561	A	06-07-1999	NONE	
GB 2210387	A	07-06-1989	NONE	
JP 58093866	A	03-06-1983	JP 1317636 C	29-05-1986
			JP 60045704 B	11-10-1985
JP 2000311870	A	07-11-2000	US 6461796 B1	08-10-2002
US 2001007708	A1	12-07-2001	US 5902647 A	11-05-1999
US 5867762	A	02-02-1999	NONE	
US 4128522	A	05-12-1978	DE 2733908 A1	02-02-1978
			FR 2359965 A1	24-02-1978
			GB 1535691 A	13-12-1978
			US 4181758 A	01-01-1980